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## 12.SPILL PREVENTION BMPS

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Small amounts of fuel, oil, and other petroleum hydrocarbons regularly introduced into the marine environment are a serious problem. This incremental pollution – a little here, some there – adds up to hundreds of thousands of gallons every year. In Maine alone, many minor spills have been reported in the last five years. Moreover, these spills may only reflect a small percentage of the total number, because only a fraction of all the small spills ever get reported.

Generally, fueling operations have the greatest potential of contributing to nonpoint pollution from spills. Another problematic activity is the repair and maintenance of engines when oil is removed from the crankcase and not disposed of properly. Storm drains also carry oil that is washed off impervious surfaces or illegally dumped into them. Rain flow and snow melt can lift up oils and carry them across paved parking lots directly into surface waters.

One common, but often overlooked, hazard is a vessel sinking at a mooring or slip. A moderately sized power boat can carry several gallons of fuel and at least some oil which, if not contained, will spill into the water as the boat sinks. Although the environmental impact may not seem significant from any individual minor spill, the cumulative impact of many spills over time may be considerable.

In recent years, federal regulation of oil spill response and recovery has tightened. Any sheen seen upon the navigable waters of the United States must be reported to the Coast Guard. New regulations prohibit the use of dispersants on oil spills without the permission of a Coast Guard on-scene coordinator. The regulations clarify the policies and procedures for recovering expenses incurred for removal and damages. In certain cases, the person responsible for the spill may be responsible for the clean-up.

Any facility that handles or stores fuel should act to minimize potential dangers. This chapter suggests practices to prevent spills and improve the process of recovery from an accident. In addition to implementing best management practices, marinas and boatyards should develop an oil spill response plan. The following model can be used to develop a facility's own response plan.

### **SPILL CONTINGENCY PLAN**

A spill contingency plan is required for each area where oil and hazardous material are used or stored. Such plans should specify potential spill sources, oil and hazardous material used or stored in the area, prevention measures (e.g. security, inspection, containment, training, equipment), and spill

emergency procedures, including health and safety, notification, and spill containment and control measures. A drainage plan should be included as part of the plan. Emergency telephone numbers should also be included in the plan and posted at critical locations.

If spill occurs or any oil or hazardous material is accidentally discharged into the water of the state or onto land with any potential for entry into state surface or ground waters, the Maine DEP Bureau of Remediation and Waste Management should be notified immediately by calling (207) 287-2651 or 1-800-432-0777.

The plan should be short, with clear directions that can be understood by each employee. Components of a spill recovery plan should address the following:

**Who:** Clearly identify who is responsible for taking what action. Action items will include deploying the equipment and contacting the emergency agencies and additional resources. The plan should contain a list, updated periodically, of emergency phone numbers that would be used during a spill event. One person on the marina staff should be designated the official spokesperson for the facility.

**What:** Plan what action should be taken during an oil spill event and, based on likely threats, what equipment should be deployed. Include information on what type of spill equipment is available on-site and what its characteristics and capabilities are.

**When:** Decide when additional resources should be called for assistance and when the equipment will be inspected and replaced, if necessary. Establish a schedule for maintaining and practicing with the equipment.

**Where:** Know where the material is located in the facility. Identify sources where additional oil response equipment can be quickly obtained, if it is necessary. Sources may include commercial response companies or neighboring marinas that have oil spill response equipment. If a commercial oil spill response firm is going to be used, consider establishing a pre-arranged agreement with them.

**How:** Explain how the equipment should be used and disposed of. To be sure that the crew understands the response plan, conduct drills that simulate an oil spill. Evaluate the drill and share observations with all your employees.

Inform your local harbormaster and fire department about your spill recovery plan and equipment. Because the fire department and the harbormaster may be included in any first response action, it may be appropriate for them to have

a copy of the oil spill plan on file. This will improve the marina's efficiency when working with the municipality in response to a major oil spill. In some cases, the marina operator has granted permission of the city or town to use the response equipment, if necessary. Marina operators may also consider inviting the harbormaster or fire department to participate in drills as they are held at the facility.

In the event of an actual spill, cleanup efforts should begin immediately and be completed as soon as possible, taking precedence over normal work. The cleanup should include properly disposing of any spilled material and used cleanup material. The following steps should be performed as quickly as possible:

- Stop the source of the spill.
- Contain the liquid.
- Cover the spill with absorbent material such as kitty litter, sawdust, or oil absorbent pads. Do not use straw.
- For small spills of flammable liquids, the absorber can be aired out – check with the local fire department. When the absorber is dry, put it in a dumpster. Keep the area well ventilated.
- Deploy containment booms if any spill may reach the water.
- Comply with state and federal regulations to contain and clean up the spill, and dispose of materials at an approved facility.

## **GENERAL PRACTICES**

### **Prevent spills from occurring by using appropriate fueling procedures.**

As always, prevention is cheaper than clean-up. Employees and boaters should be reminded not to "top off" the gas tank, but to fill it three-quarters full to avoid splash-back and to account for expansion. Nozzles should be placed in a container rather than left on the dock. Where possible, locate and design fueling stations so that spills can be easily contained with booms.

The key to spill protection is early response and action. The spill response equipment should be stored in an area where it can be deployed quickly. Consider storing the equipment near where the greatest threat of an oil spill exists. In most marinas, this is the fueling station.

### **Make spill response equipment readily available.**

However the spill response equipment is stored, it should be readily accessible to your staff, especially those who handle the fueling operation. Some marinas have opted to not lock the storage container and leave it accessible for all patrons to use at their discretion. This may encourage quicker response to

smaller spills that are away from the fueling dock or which occur when staff are not on duty.

## **SPILL RESPONSE EQUIPMENT**

The type of spill response equipment needed depends on the type of boating facility and the type of vessels stored there. At a minimum, the response kit should include absorbent pads and booms, fire extinguishers, a copy of the Spill Contingency Plan, and other appropriate equipment.

Booms absorb up to 25 times their weight in petroleum products while still floating. Booms are available at a cost of approximately \$160 for four 10 foot booms, 8 inches in diameter. The amount (linear footage) of boom will depend on the size of the largest fuel tank on board a vessel in your facility. As a standard rule, for every foot of boat, expect to use three feet of boom. For example, 120 feet of boom would be needed to adequately encircle a 40 foot boat.

Generally, there are two types of booms. One type, the oil containment floating boom, prevents oil from spreading on the surface by acting as a floating barrier. The second type, the oil-absorbing floating boom, prevents the oil from spreading and also absorbs the oil. Both types can be strung together to encircle the affected area, but become less effective as wave action increases.

Absorbent pads are available in a multitude of shapes, sizes and prices. These products are designed to absorb and trap hydrocarbons for easy disposal. They are primarily used for quickly cleaning up light fuel spills by throwing them into the oil slick and retrieving them once they are saturated. Some marinas have adopted the practice of securing oil absorbent material at the waterline of floating fuel docks to quickly capture small spills.

Traditional dispersants (soaps) should not be used. These chemicals do not remove the oils from the environment but simply move them from the surface to subsurface areas. When oil is dispersed to subsurface areas, it usually becomes entrapped in bottom sediments, potentially causing long-term damage. Substances using enzymes or other innovative approaches that actually remove the hydrocarbons from the environment are acceptable, if they are available.

## **SECONDARY SPILL PROTECTION**

All containers used to store secondary spill response equipment should have a form of secondary containment. In most cases, this secondary containment must equal 110% of the capacity of the primary container. Generally, this backup is provided by constructing a non-leaching berm with an impervious

bottom around the containers. Other methods include a fully enclosed containment facility outside the primary containment vessel.

### **SPECIAL HAZARDS**

Consider the possibility of storm or flood when planning the placement of a waste oil reception facility. Locate the containment facility in an area that is least prone to flooding or storm damage. If the facility is mobile, it can be moved in the event of a nor'easter or hurricane. Shipping containers can be retrofitted to serve as storage facilities competent in substance control, secondary spill protection, and special hazards. A twenty-foot standardized shipping container can hold multiple 55 gallon drums, provide secondary containment, has only a single access point that is easily controllable, and is wholly moveable.

Consult with your local fire chief to reduce the possibility of fire. If you are storing oil or other flammable substances in an enclosed area, the fire marshal may request that the outside of the container be labeled with the flammability of its contents. Fire-fighting equipment, such as fire extinguishers, may be required to be mounted near the storage facility. In some instances, automated fire fighting systems may be used. The contents of the storage facility should be kept on record and be accessible to fire fighting personnel.